

Greenlist Bulletin

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at the University of Massachusetts Lowell

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This is the weekly bulletin of the TURI Library at the University of Massachusetts Lowell. Greenlist Bulletin provides previews of recent publications and websites relevant to reducing the use of toxic chemicals by industries, businesses, communities, individuals and government. You are welcome to send a message to jan@turi.org if you would like more information on any of the articles listed here, or if this email is not displaying properly.



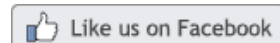
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The road to 2020: corporate progress on the Ceres Roadmap for Sustainability

[Source: Ceres. April 25, 2012](#)

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As the world population soars beyond seven billion, human beings are putting unprecedented demands on natural resources, demanding more and more energy, generating ever-higher levels of greenhouse gases. Can our global economy, and the environment on which it depends, survive these stresses? How can businesses thrive given the physical, economic and social risks associated with climate change, water scarcity and increasingly extensive, vulnerable supply chains?

Two years ago, Ceres, whose mission is to drive corporate sustainability leadership and build a durable prosperity, created a virtual owner's manual for the 21st-century corporation, The Ceres Roadmap for Sustainability. The roadmap comprises of 20 specific expectations that companies must meet - in governance, disclosure, stakeholder engagement and actual performance - if they expect to prosper in a new world of risk and opportunity. Business-as-usual is a strategy for failure. Companies that embrace the sustainability challenges before them and have the strategies to meet them will succeed.

Today, in partnership with Sustainalytics, we are releasing The Road to 2020: Corporate Progress on the Ceres Roadmap for Sustainability, a detailed evaluation of how well 600 major US corporations are meeting the roadmap's expectations.

The good news is that there are pockets of corporate sustainability leadership; companies that are making significant strides towards becoming truly sustainable enterprises. In the process they're not only laying the groundwork for their own success, they're making a real contribution to building a sustainable global economy for all. The bad news is that most companies have barely begun the journey towards sustainability and remain stuck in outmoded ways of doing

business. The pace of change must accelerate because our major sustainability threats such as climate change and water scarcity are coming at us faster and harder than projected just a few years ago.

As optimists, we see the relative poor showing of many companies as an opportunity, and The Road to 2020 highlights dozens of company examples in the hope of inspiring others. For example, Intel is cited for linking executive and employee compensation to company environmental goals such as reducing energy use and greenhouse gas (GHG) emissions; in the two years since it started the program, the company has cut energy use by 8% and GHGs by 23%.

Alcoa and Xcel are also relative pacesetters for strong governance practices, while Baxter and Ford are setting a high standard for stakeholder engagement. On the performance side, Coca-Cola is credited for being on track to improve water efficiency by 20% by the end of this year (against a 2004 baseline). Other cutting-edge performance examples: Nike's new partnership to implement a water-free fabric dyeing process; Kohl's achievement of net-zero GHGs at its stores; Pinnacle West using recycled urban wastewater (about 75bn litres a year) to cool a nuclear plant; and EMC creating virtual data centres to replace physical, energy-sapping data centres, saving more than \$20m (£12.4bn) in the process.

These companies aren't taking these steps just because they believe it's the right thing to do; they're realising great cost savings, making themselves more competitive, creating long-term shareholder value, enhancing their brand reputations and attracting new customers and dedicated employees. This isn't to say that these companies scored well on all of the expectations of the roadmap, but they are showing leadership in important ways.

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Exposures to pesticide in utero linked to brain abnormalities

[Source: San Francisco Chronicle, April 30, 2012](#)

Author: Nicole Ostrow

Babies exposed in the womb to a commonly used insecticide have brain abnormalities after birth, according to a study that looked at children born before the U.S. limited the chemical's use.

Magnetic resonance imaging of elementary school-aged children with the highest exposure to chlorpyrifos, used mostly in agricultural settings now, showed structural changes in the brain compared with those who had the lowest exposure, research online today in Proceedings of the National Academy of Sciences found. Some parts of the brain were overgrown, while other regions were smaller, the scientists found.

The study is the first to use imaging scans to show that prenatal exposure to the chemical, included in Dow Chemical Co.'s pesticide Dursban, is linked to structural changes in the brain five to 10 years after exposure, said Virginia Rauh, the lead author. While the chemical's use was banned in residential areas 12 years ago, many women are exposed to moderate levels in agricultural settings and through food residue, Rauh said.

"Prenatal exposure to chlorpyrifos is risky for pregnant women and should be avoided," said Rauh, a professor of clinical population and family health at Columbia University in New York, in an April 27 e-mail. "Mother breathes or ingests the chlorpyrifos, which then enters her blood stream. The chemical crosses the placenta and enters the infants' blood stream."

[Read more](#)

Pollution Prevention Institute to help NY companies use green technologies

[Source: NY State Department of Environmental Conservation, April 26, 2012](#)

The New York State Pollution Prevention Institute (NYSP2I) at Rochester Institute of Technology today launched its Green Initiative to provide a sustainable road map for New York businesses, state Department of Environment Conservation Commissioner Joe Martens and NYSP2I Director Anahita Williamson announced. The Green Initiative programs will propel nascent green technologies and products to the next step in commercialization and provide expertise in developing more sustainable manufacturing supply chains.

The Green Initiative will foster a new era of manufacturing competitiveness by creating opportunities for innovation, environmental stewardship and production efficiency. The effort is divided into two components, the Green Technology Accelerator Center, or GTAC, and the Sustainable Supply Chain and Technology Program. Both components of the two-year program were developed to increase the availability of green jobs and generate additional revenue for New York state businesses.

"P2I is once again promoting sustainability by helping New York businesses use more environmentally friendly practices that have the potential to increase their bottom lines," Martens said. "P2I's Green Initiative is proving that what is good for the environment is also good for the economy. DEC is proud to fund P2I's efforts to lessen the environmental footprint of New York's business sector."

"NYSP2I is excited to launch the Green Initiative," said Williamson. "Both the Green Technology Accelerator Center and Sustainable Supply Chain & Technology Programs align with New York State's mission to continue to grow jobs. These programs will fill the gaps and provide technical assistance to incubators and existing companies wanting to develop, accelerate and compete in current and emerging markets."

NYSP2I's GTAC will help three to six companies market green technologies and products. Through the program, NYSP2I, university partners and technology incubators will provide technical development assistance and support to both startup and established companies to develop and commercialize green technology concepts. Products may include sustainable building materials, green chemicals, water and energy efficiency technologies, toxin replacement and substitution, material recycling and remanufacturing.

The Sustainable Supply Chain and Technology Program will help eight New York state manufacturers take advantage of global sustainable manufacturing and green supply chain opportunities. It will enable manufacturers to enter into new and existing green markets by helping them identify and comply with voluntary green standards and certification requirements. NYSP2I will also provide technical assistance to manufacturers in sustainable practices and help New York state suppliers market products that meet sustainability standards.

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Nanotechnology: a policy primer

[Source: Congressional Research Service, April 13, 2012](#)

Author: John F. Sargent Jr.

Nanoscale science, engineering, and technology-commonly referred to collectively as nanotechnology-is believed by many to offer extraordinary economic and societal benefits.

Congress has demonstrated continuing support for nanotechnology and has directed its attention primarily to three topics that may affect the realization of this hoped for potential: federal research and development (R&D) in nanotechnology; U.S. competitiveness; and environmental, health, and safety (EHS) concerns. This report provides an overview of these topics-which are discussed in more detail in other CRS reports-and two others: nanomanufacturing and public understanding of and attitudes toward nanotechnology.

The development of this emerging field has been fostered by significant and sustained public

investments in nanotechnology R&D. Nanotechnology R&D is directed toward the understanding and control of matter at dimensions of roughly 1 to 100 nanometers. At this size, the properties of matter can differ in fundamental and potentially useful ways from the properties of individual atoms and molecules and of bulk matter. Since the launch of the National Nanotechnology Initiative (NNI) in 2000 through FY2012, Congress has appropriated approximately \$15.6 billion for nanotechnology R&D, including approximately \$1.7 billion in FY2012 funding under the Consolidated and Further Continuing Appropriations Act, 2012 (P.L. 112-55) and the Consolidated Appropriations Act, FY2012 (P.L. 112-74). President Obama has requested \$1.8 billion in NNI funding for FY2013. More than 60 nations have established similar programs. In 2010, total global public R&D investments reached an estimated \$8.2 billion, complemented by an estimated private sector investment of \$9.6 billion. Data on economic outputs used to assess competitiveness in mature technologies and industries, such as revenues and market share, are not available for assessing nanotechnology. Alternatively, data on inputs (e.g., R&D expenditures) and non-financial outputs (e.g., scientific papers, patents) may provide insight into the current U.S. position and serve as bellwethers of future competitiveness. By these criteria, the United States appears to be the overall global leader in nanotechnology, though some believe the U.S. lead may not be as large as it was for previous emerging technologies.

Some research has raised concerns about the safety of nanoscale materials. There is general agreement that more information on EHS implications is needed to protect the public and the environment; to assess and manage risks; and to create a regulatory environment that fosters prudent investment in nanotechnology-related innovation. Nanomanufacturing—the bridge between nanoscience and nanotechnology products—may require the development of new technologies, tools, instruments, measurement science, and standards to enable safe, effective, and affordable commercial-scale production of nanotechnology products. Public understanding and attitudes may also affect the environment for R&D, regulation, and market acceptance of products incorporating nanotechnology.

In 2003, Congress enacted the 21st Century Nanotechnology Research and Development Act providing a legislative foundation for some of the activities of the NNI, addressing concerns, establishing programs, assigning agency responsibilities, and setting authorization levels. Legislation was introduced in the 110th Congress and 111th Congress to amend and reauthorize the act.

CSB Releases New Safety Video on Fatal Hot Work Explosion at DuPont Facility in Buffalo

[Source: U.S. Chemical Safety Board. April 20, 2012](#)

The U.S. Chemical Safety Board (CSB) today released a new safety video detailing a fatal 2010 hot work accident that occurred at the DuPont facility near Buffalo, New York.

The video, entitled "Hot Work: Hidden Hazards" features a computer animation showing how hot work being conducted on top of a tank led to a deadly explosion that killed one contractor and injured another.

CSB Chairperson Rafael Moure-Eraso said, "This is another in our series of safety videos in wide use in industry throughout the world; our hope is that this dramatic depiction will result in greater emphasis in safety during hot work activities like welding and grinding."

In the video, Dr. Moure-Eraso notes that, "The tragic explosion at the DuPont facility exposed weaknesses in how process hazards were analyzed and controlled. The result was the death of a welder in a preventable hot work accident." In the video Chairperson Moure-Eraso emphasizes that hot work is often seen as a routine activity, but it can prove deadly if fire and explosion hazards are overlooked."

The 11-minute video details the events leading up to the accident noting that although DuPont personnel monitored the atmosphere above the tank, no monitoring was done to see if any flammable vapor was inside the tank. The CSB investigation found the hot work ignited the vapor as a result of the increased temperature of the metal tank, sparks falling into the tank, or vapor wafting from the tank into the hot work area. The welder died instantly from blunt force trauma, and a foreman received first-degree burns and minor injuries.

CSB Investigator Mark Wingard says in the video, "We found that the contractors did obtain hot work permits for welding, but those permits were authorized by DuPont employees who were unfamiliar with the specific hazards of the process and did not require testing the atmosphere

inside the tanks."

[Read more and view the video](#)



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